

PUBLICATIONS

CHRIS QUIGG

1. “A Relativistic Calculation of the Bremsstrahlung Spectrum of a Maxwell-Boltzmann Plasma,” Lawrence Radiation Laboratory Report UCRL-50227 (1967, unpublished).
2. “Relativistic Correction to Plasma Bremsstrahlung,” *Physics of Fluids* **11**, 461 (1968).
3. “Electron-Ion Bremsstrahlung from an Extreme-Relativistic Plasma,” *Astrophysical Journal* **151**, 1187 (1968).
4. “Decays of Neutral Pseudoscalar Mesons into Lepton Pairs” (with J. D. Jackson), Lawrence Radiation Laboratory Report UCRL-18487 (1968, unpublished).
5. “Charged-Pion Photoproduction and Finite-Energy Sum Rules” (with J. D. Jackson), *Physics Letters* **29B**, 236 (1969).
6. “Theory of $\rho - \omega$ Interference in $\pi^+\pi^-$ Production” (with A. S. Goldhaber and G. C. Fox), *Physics Letters* **30B**, 249 (1969).
7. “Expectations for $\rho - \omega$ Interference in the reaction $\pi^+p \rightarrow \pi^+\pi^-\Delta^{++}$ at 7 GeV/c,” Lawrence Radiation Laboratory Informal Document UCID-3413 (December, 1969, unpublished).
8. “Decay Distributions in $K_2p \rightarrow p(K^*, \bar{K}^*)$ as Tests of Exchange Degeneracy,” Lawrence Radiation Laboratory Informal Document UCID-3418 (January, 1970, unpublished).
9. “Remarks on Pion Photoproduction” (with J. D. Jackson), *Nuclear Physics* **B22**, 301 (1970).
10. “Compilation of Elastic Scattering Data” (with G. C. Fox), Lawrence Radiation Laboratory Report UCRL-20001 (January, 1970).
11. “Centrifugal Barrier Effects in Meson Decays” (with F. von Hippel), in *Experimental Meson Spectroscopy*, edited by C. Baltay and A. H. Rosenfeld (Columbia University Press, New York, 1970), p. 477.
12. “High-Energy Hadron-Deuteron Scattering” (with C. J. Joachain), Lawrence Radiation Laboratory Report UCRL-19851 (June, 1970, unpublished).
13. “Two-Reggeon-Exchange Contributions to Hadron Scattering Amplitudes at High Energy,” (Ph. D. Thesis), Lawrence Radiation Laboratory Report UCRL-20032 (September, 1970).
14. “Phenomenological Consequences of a Regge Cut Model that Satisfies $s - u$ Crossing,” *Nuclear Physics* **B29**, 67 (1971).
15. “New Regge Phenomenology of Inclusive Reactions” (with Chan Hong-Mo, C. S. Hsue, and Jiunn-Ming Wang), *Physical Review Letters* **26**, 672 (1972).

16. “Multiparticle Reactions at Intermediate Energies,” in *Proceedings of the Workshop on Particle Physics at Intermediate Energies, Pasadena, March, 1971*, UCRL-20655, p. 277.
17. “Regge Cut Contributions to Exotic Boson Exchange Cross Sections,” *Nuclear Physics* **B34**, 77 (1971).
18. “Models for High Energy Collisions of Hadrons,” in *Proceedings of the International Seminar on Binary Reactions of Hadrons at High Energies, Dubna, 1971*, p. 393.
19. “Centrifugal Barrier Effects in Resonance Partial Decay Widths, Shapes, and Production Amplitudes” (with F. von Hippel), *Physical Review D***5**, 624 (1972); also included in *Planning for the Future, Zero-Gradient Synchrotron Workshops*, Summer, 1971, Argonne National Laboratory Report ANL/HEP-7208, vol. II, p. 648.
20. “How Much of ‘Diffraction Dissociation’ Cross Sections is Diffractive?” (with G. Cohen-Tannoudji and G. L. Kane), *Nuclear Physics* **B37**, 77 (1972).
21. “Inclusive Reactions,” in *Particles and Fields – 1971*, edited by A. C. Melissinos and P. Slattery (American Institute of Physics, New York), p. 40.
22. “Inclusive Nuclear Reactions,” (January, 1972, unpublished).
23. “Two-Particle Correlations in 9 GeV/c K^-p Collisions” (with M. C. Foster), *Physical Review D***7**, 108 (1973).
24. “Multiplicity Fluctuations and Multiparticle Distribution Functions in High Energy Collisions” (with Jiunn-Ming Wang and Chen Ning Yang), *Physical Review Letters* **28**, 1290 (1972); reprinted in *Geometrical Pictures in Hadronic Collisions*, edited by S. Y. Lo (World Scientific, Singapore, 1987), p. 330.
25. “Inclusive Spectra in Deeply Inelastic ep Collisions” (with J.-M. Wang), *Physical Review D***6**, 2690 (1972).
26. “Physics with ISABELLE,” Brookhaven National Laboratory Report BNL-16997, Intersecting Storage Accelerator Notes CRISP 72-36 (June, 1972); included in *ISABELLE Physics Prospects*, edited by R. B. Palmer, BNL-17522, p. 19.
27. “Asymmetries of Multiplicity Cross Sections” (with S. Nussinov and J.-M. Wang), *Physical Review D***6**, 2713 (1972).
28. “Commentary on the Session on Production Mechanisms of Meson Resonances,” in *Experimental Meson Spectroscopy – 72*, edited by A. H. Rosenfeld and K.-W. Lai (American Institute of Physics, New York), p. 269.
29. “Charged Particle Multiplicity and Angular Correlation Measurements in pp and γp Collisions” (with R. Arnold, G. Finocchiaro, P. Grannis, J. Kirz, and A. S. Carroll), Brookhaven National Laboratory Report BNL-17141, Intersecting Storage Accelerator Notes CRISP 72-65; included in *ISABELLE Physics Prospects*, edited by R. B. Palmer, BNL-17522, p. 363.

30. "Pion-Deuteron Scattering at High Energies" (with D. P. Sidhu), *Physical Review D* **7**, 755 (1973).
31. "Deuteron Screening at High Energies: An Application of Triple-Regge Analysis" (with L.-L. Wang), *Physics Letters* **43B**, 314 (1973).
32. "On a Two-Component Interpretation of Multiplicity Distributions" (with J. D. Jackson), National Accelerator Laboratory Report NAL-THY-93 (1972, unpublished).
33. "Charge Transfer in a Multiperipheral Picture" (with G. H. Thomas), *Physical Review D* **7**, 2752 (1973).
34. "Multiple Scattering Expansions in Several Particle Dynamics" (with C. J. Joachain), *Reviews of Modern Physics* **46**, 279 (1974).
35. "Production Mechanisms of Two-to-Two Scattering Processes at Intermediate Energies" (with G. C. Fox), *Annual Review of Nuclear Science* **23**, 219 (1973).
36. "Perspectives on Correlations: *De Omni Re Scibili et Quibusdam Aliis*," in *Experiments on High Energy Particle Collisions - 1973*, edited by R. S. Panvini (American Institute of Physics, New York), p. 375.
37. "Constituent Picture of Two-Body Scattering at Large Angles" (with P. Fishbane), *Nuclear Physics* **B61**, 469 (1973).
38. "Mueller-Regge Phenomenology in the Central Region" (with J. R. Freeman), *Physics Letters* **47B**, 39 (1973).
39. "Two-Component Models for Particle Production," in *Proceedings of the Canadian Institute of Particle Physics Summer School, 1973*, edited by R. Henzi and B. Margolis (McGill University, Montreal), p. 517.
40. "What Have We Learned from High-Energy Experiments?" in *Particles and Fields - 1973*, edited by H. H. Bingham, M. Davier, and G. Lynch (American Institute of Physics, New York), p. 520.
41. *High Energy Collisions - 1973* (editor) (American Institute of Physics, New York).
42. "Clustering in Multiple Production" (with A. W. Chao), *Physical Review D* **9**, 2016 (1974).
43. "Remarks on the Search for Exotic Exchange" (with P. Hoyer), *Nuclear Physics* **B80**, 127 (1974).
44. "Meson Spectroscopy and the Phenomenology of High Energy Collisions," in *Experimental Meson Spectroscopy - 1974*, edited by D. A. Garelick (American Institute of Physics, New York, 1974), p. 297.
45. "Direct Evidence for Independent Emission of Clusters" (with P. Pirilä and G. H. Thomas), *Physical Review Letters* **34**, 290 (1975).

46. “Local Quantum Number Compensation in Multiple Production,” *Physical Review D***12**, 834 (1975).
47. “Some Considerations on η_c ” (with B. W. Lee), Fermilab-74/110-THY, December, 1974; not for publication.
48. “Estimates of Associated Charm Production Cross Sections” (with R. D. Field), Fermilab-75/15-THY, January, 1975; not for publication.
49. “Isolating the Exchanges in Multiple Production” (with P. Pirilä and G. H. Thomas), *Physical Review D***12**, 92 (1975).
50. “Coherent Production and Decay Modes of a Pseudoscalar Partner of the $\psi(3105)$ Boson” (with R. F. Dashen, I. J. Muzinich, and B. W. Lee), Fermilab-Pub-75/18-THY.
51. “Nonleptonic Decays of Charmed Mesons: Implications for e^+e^- Annihilation” (with M. B. Einhorn), *Physical Review D***12**, 2015 (1975).
52. “Rapidity Gap Distributions and Clustering in Multiparticle Production” (with A. Krzywicki and G. H. Thomas), *Physics Letters* **57B**, 369 (1975).
53. “Comment on a Recent Search for Charm” (with M. B. Einhorn), *Physical Review Letters* **35**, 1114C (1975).
54. “An Agenda for Correlations,” in *Proceedings of the VIth International Colloquium on Multiparticle Reactions*, Oxford, 1975, edited by Chan Hong-Mo, R. J. N. Phillips, and R. G. Roberts (Rutherford High Energy Laboratory, Chilton), p. 59.
55. “Developments in Strong Interaction Physics,” in *Particles and Fields – 1975*, edited by H. J. Lubatti and P. M. Mockett (University of Washington, Seattle), p. 1.
56. “ $SU(3)$ Content of the Pommeranchuk Singularity” (with E. Rabinovici), *Physical Review D***13**, 2525 (1976).
57. “Hadron Physics with Hyperon Beams” (with J. L. Rosner), *Physical Review D***14**, 160 (1976).
58. “An Experimental Fable” (with B. W. Lee), *Comments on Nuclear and Particle Physics* **6**, 93 (1976); included in *A Perspective of Physics*, Vol. I, edited by Sir Rudolf Peierls (Gordon & Breach, New York, 1977), p. 9.
59. “Comment on Hadronic Production of Psions” (with S. D. Ellis and M. B. Einhorn), *Physical Review Letters* **36**, 1263C (1976).
60. “Postlude,” Summary of the IIInd International Conference on New Results in High Energy Physics at Vanderbilt, in *Particle Searches and Discoveries – 1976*, edited by R. S. Panvini (American Institute of Physics, New York, 1976), p. 321.
61. “Lectures on Weak Interactions,” Fermilab-Lecture-76/01-THY/EXP (February, 1976).

62. “Hyperon-initiated Reactions at High Energies” (with R. D. Field), *Nuclear Physics* **B117**, 303 (1976).
63. “Neutrino-Proton Elastic Scattering: Implications for Weak Interaction Models” (with C. H. Albright, R. E. Shrock, and J. Smith), *Physical Review* **D14**, 1780 (1976).
64. “Gauge Theories and νp Elastic Scattering” (with C. H. Albright, R. E. Shrock, and J. Smith), Fermilab-Pub-76/45-THY (unpublished).
65. “Peripheral Models,” in *Encyclopedia of Physics*, edited by R. G. Lerner and G. L. Trigg (Addison-Wesley, Reading, Massachusetts, 1981), p. 734.
66. “Tests for Weak Decays of Charmed Particles” (with B. W. Lee and J. L. Rosner), *Comments of Nuclear and Particle Physics* **7**, 49 (1977).
67. “Charmed Baryon Interpretation of $\Lambda\pi^-\pi^-\pi^+$ and $\Lambda\pi^-\pi^-\pi^+\pi^+$ Peaks” (with B. W. Lee and J. L. Rosner), *Physical Review* **D15**, 157 (1977).
68. “An Estimate of the Branching Ratios for Dalitz Pair Decays of the ω^0 Meson” (with C. H. Lai), Fermilab Physics Note FN-296 (September, 1976).
69. “Production and Detection of Intermediate Vector Bosons and Heavy Leptons in pp and $\bar{p}p$ Collisions,” Fermilab booklet, January, 1977, and *Reviews of Modern Physics* **49**, 297 (1977).
70. “The Strength of Weak Interactions at High Energies and the Mass of the Higgs Boson” (with B. W. Lee and H. B. Thacker), *Physical Review Letters* **38**, 883 (1977).
71. “Issues in Charmed Particle Spectroscopy,” in *Leptons and Multileptons*, edited by J. Tran Thanh Van (Editions Frontières, Paris, 1977), p. 519.
72. “Weak Interactions at Very High Energies: The Role of the Higgs Boson Mass” (with B. W. Lee and H. B. Thacker), *Physical Review* **D16**, 1519 (1977).
73. “Dilepton Production in Hadron-Hadron Collisions and the ‘Factor of Three’ from Color,” in *Color Symmetry and Quark Confinement*, edited by J. Tran Thanh Van (Editions Frontières, Paris, 1977), p. 93.
74. “Hadronic Decays of η_c ” (with J. L. Rosner), *Physical Review* **D16**, 1497 (1977).
75. “Hadronic Decays of Charmed Mesons” (with J. L. Rosner), *Physical Review* **D17**, 239 (1978).
76. “The Cluster Concept in Multiple Hadron Production” (with I. M. Dremin), *Science* **199**, 937 (1978); also published as “Klasteri v Protsessakh Mrozhestvennogs Rozhdenia Adronov” in *Uspekhi Fizicheskikh Nauk USSR* **124**, 535 (1978); English translation: *Soviet Physics – Uspekhi* **21**, 265 (1978).
77. “Benjamin W. Lee” (with S. Weinberg), *Physics Today* **30**, (9) 76 (1977).

78. “Quarkonium Level Spacings” (with J. L. Rosner), *Physics Letters* **71B**, 153 (1977).
79. “Scaling the Schrödinger Equation” (with J. L. Rosner), *Comments on Nuclear and Particle Physics* **8**, 11 (1978).
80. “Counting Narrow Levels of Quarkonium” (with J. L. Rosner), *Physics Letters* **72B**, 462 (1978).
81. “Dedication to B. W. Lee” (with H. J. Lipkin, A. K. Mann, S. Meshkov, J. Rosner, R. Shrock, and S. Treiman), in *Unification of Elementary Forces and Gauge Theories*, edited by D. B. Cline and F. E. Mills (Harwood Academic Publishers, London, 1979), p. xv.
82. “Semiclassical Sum Rules” (with J. L. Rosner), *Physical Review D* **17**, 2364 (1978).
83. “Inverse Scattering Approach to Quarkonium Potentials. I: One-Dimensional Formalism and Methodology” (with H. B. Thacker and J. L. Rosner), *Physical Review D* **18**, 274 (1978).
84. “Inverse Scattering Approach to Quarkonium Potentials. II: Applications to ψ and Υ Families” (with H. B. Thacker and J. L. Rosner), *Physical Review D* **18**, 287 (1978).
85. “New (Quark) Flavors,” in *New Frontiers in High Energy Physics*, edited by B. Kursonoglu, A. Perlmutter, and L. F. Scott (Plenum, New York, 1978), p. 263.
86. “Measuring the Fifth Quark’s Charge: The Role of Υ Leptonic Widths” (with J. L. Rosner and H. B. Thacker), *Physics Letters* **74B**, 350 (1978).
87. “Quarkonium Quantum Mechanics,” *CERN Courier* **18**, 215 (1978).
88. “Lectures on Charmed Particles,” in *Proceedings of the XIth International School for Young Scientists on High-Energy Physics and Relativistic Nuclear Physics*, Gomel, Byelorussia, September, 1977 (JINR, Dubna, 1979), p. 203.
89. “Multilepton Final States and the Weak Interactions of the Fifth Quark” (with J. L. Rosner), *Physical Review D* **19**, 1532 (1979).
90. “New Particles, Theoretical” (with J. D. Jackson and J. R. Rosner), in *Proceedings of the XIX International Conference on High Energy Physics, Tokyo, 1978*, edited by S. Homma, M. Kawaguchi, and H. Miyazawa (Physical Society of Japan, Tokyo, 1979), p. 391.
91. “Quantum Mechanics and Quarkonium: An Introductory Review,” in *Proceedings of the 1978 International Meeting on Frontier of Physics, Singapore*, edited by K. K. Phua, C. K. Chew, and Y. K. Lim (Singapore National Academy of Science, 1979), vol. II, p. 665; and in *Proceedings of the Seoul Symposium on Elementary Particle Physics in Honor of Benjamin W. Lee*, edited by J. Kim, P. Y. Pac, and H. S. Song (Seoul National University Press, 1978), p. 113.
92. “Fermilab Research Results 1978” (with Leon Lederman), Fermilab booklet (January, 1979).

93. “Quantum Mechanics with Applications to Quarkonium” (with J. L. Rosner), *Physics Reports* **56**, 167 (1979).
94. “Constructive Evidence for Flavor Independence of the Quark-Antiquark Potential” (with J. L. Rosner and H. B. Thacker), contribution to the European Physical Society Conference on High Energy Physics, Geneva (June, 1979); expanded version published in *Physical Review D* **21**, 234 (1980).
95. “Charmed Meson Decays and the Structure of the Charged Weak Current,” *Zeitschrift für Physik C* **4**, 55 (1980).
96. “Bound States of Heavy Quarks and Antiquarks,” in *Proceedings of the 1979 International Symposium on Lepton and Photon Interactions at High Energies*, edited by T. B. W. Kirk and H. D. I. Abarbanel (Fermilab, Batavia, 1980), p. 239.
97. “On the Convergence of Reflectionless Approximations to Confining Potentials” (with J. F. Schonfeld, W. Kwong, J. L. Rosner, and H. B. Thacker), *Annals of Physics (New York)* **128**, 1 (1980).
98. “Degeneracy in One-Dimensional Quantum Mechanics” (with W. Kwong, J. L. Rosner, J. F. Schonfeld, and H. B. Thacker), *American Journal of Physics* **48**, 926 (1980).
99. Book review: *Relativistic Particle Physics*, by Hartmut M. Pilkuhn, *Science* **208**, 1025 (1980).
100. “Intermediate Bosons: Weak Interaction Couriers” (with P. Q. Hung), *Science* **210**, 1205 (1980).
101. “Gluons,” in *McGraw-Hill Encyclopedia of Science and Technology*, 5th edition, edited by S. P. Parker (McGraw-Hill, New York, 1980), vol. 6, p. 306.
102. “Quantum Chromodynamics,” in *McGraw-Hill Encyclopedia of Science and Technology*, 5th edition, edited by S. P. Parker (McGraw-Hill, New York, 1980), vol. 11, p. 168.
103. “(Quark)onium Theory and Spectroscopy,” in *High Energy Physics - 1980*, Proceedings of the XXth International Conference on High Energy Physics, Madison, Wisconsin, edited by L. Durand and L. Pondrom (American Institute of Physics, New York, 1981), p. 713.
104. “Introduction to Gauge Theories of the Strong, Weak, and Electromagnetic Interactions,” in *Techniques and Concepts of High Energy Physics*, edited by T. Ferbel (Plenum, New York, 1981), p. 143.
105. “Inverse Scattering and the Υ Family” (with J. L. Rosner), in *High Energy Physics - 1980*, Proceedings of the XXth International Conference on High Energy Physics, Madison, Wisconsin, edited by L. Durand and L. Pondrom (American Institute of Physics, New York, 1981), p. 719.

106. Book Review: *Elementary Particle Physics*, by David C. Cheng and Gerard K. O'Neill, *Physics Today* **33** (10) 76 (October, 1980).
107. "Further Evidence for Flavor-Independence of the Quark-Antiquark Potential" (with J. L. Rosner), *Physical Review D* **23**, 2625 (1981).
108. "Beyond Upsilon: Heavier Quarkonia and the Interquark Force" (with P. Moxhay and J. L. Rosner), *Physical Review D* **23**, 2638 (1981).
109. "Particle, Elementary," in *Encyclopedia Americana* (1982 edition).
110. "What We Can Learn from Lepton-Quark Interactions," in *Physics in Collision*, vol. 1, edited by W. P. Trower and G. Bellini (Plenum, New York, 1982), p. 345,
111. "Models for Hadrons," lectures given at l'Ecole d'Eté de Physique Théorique, Les Houches, in *Gauge Theories in High Energy Physics*, edited by M. K. Gaillard and R. Stora (North-Holland, Amsterdam, 1983), p. 645.
112. " e^+e^- Collisions: What Remains to be Done?" in *Quarks, Leptons, and Supersymmetry*, edited by J. Tran Thanh Van (Editions Frontières, Gif-sur-Yvette, 1982), p. 231.
113. *Gauge Theories of the Strong, Weak, and Electromagnetic Interactions* (book), (Benjamin/Cummings, Reading, Massachusetts, 1983); paperbound edition, 1984; reprinted, 1986, 1988.
114. "Hadron Jets in Perspective," Fermilab-Conf-82/91-THY, concluding talk at the Europhysics Study Conference on Jets and Multibody Phenomena in Strong, Electromagnetic, and Weak Interactions, Erice, September, 1982.
115. "Quarkonium Physics," lectures at the XXIIInd Zakopane School, *Acta Physica Polonica B* **15**, 53 (1984).
116. "Search for Supersymmetric Particles in Hadron-Hadron Collisions" (with S. Dawson and E. Eichten), *Physical Review D* **31**, 1581 (1985).
117. "Supercollider Physics" (with E. Eichten, I. Hinchliffe, and K. Lane), *Reviews of Modern Physics* **56**, 579 (1984).
118. "SSC Parameters: What Physics Demands," in *Proceedings of the 1984 DPF Summer Study on the Design and Utilization of the Superconducting Super Collider*, edited by R. Donaldson and J. G. Morfin, Fermilab, Batavia, 1985, p. 749.
119. "Higgs Bosons at the SSC: Supplement to *EHLQ*" (with E. Eichten, I. Hinchliffe, and K. Lane), in *Proceedings of the 1984 DPF Summer Study on the Design and Utilization of the Superconducting Super Collider*, edited by R. Donaldson and J. G. Morfin, Fermilab, Batavia, 1985, p. 99.
120. "The Standard Model and Beyond," Fermilab-Conf-84/88-T, prepared for the 1984 U. S. Summer School on High-Energy Particle Accelerators, Fermilab.

121. "Report of the 1984 High Energy Physics Advisory Panel Subpanel on Theoretical Computing" (with N. H. Christ, *et al.*), DOE/ER-0205, September 1984.
122. "What Lies Ahead?" in *50 Years of Weak Interactions*, edited by D. B. Cline and G. M. Riedasch (University of Wisconsin—Madison, 1985), p. 459.
123. "Physics through the 1990s: Elementary Particle Physics" (with M. L. Perl, *et al.*), (National Academy Press, Washington, 1986).
124. "Elementary Particles and Forces," *Scientific American* **252** (4) 84 (April, 1985). Reprinted in *The World of Physics*, edited by Jefferson Hane Weaver (Simon and Schuster, New York, 1987), vol. II, p. 869. Included in *Particles and Forces: At the Heart of Matter*, a *Scientific American* Reprint Volume, edited by Richard A. Carrigan, Jr., and W. Peter Trower (W. H. Freeman and Co., New York, 1990), p. 3.
125. "Supercollider Physics," in *Proceedings of the International Symposium on Physics of Proton–Antiproton Collision*, Tsukuba, edited by Y. Shimuzu and K. Takikawa, KEK Report 85–5, p. 499.
126. Book review: *The Particle Connection*, by Christine Sutton, *American Scientist* **73**, 476 (1985).
127. "Computing for Particle Physics" (with J. Ballam, *et al.*), Report of the High Energy Physics Advisory Panel Subpanel on Computer Needs for the Next Decade, DOE/ER-0234, August 1985.
128. "Report of the Briefing Panel on Scientific Frontiers and the Superconducting Super Collider" (with S. Wojcicki, *et al.*), in *Research Briefings 1985*, (National Academy Press, Washington, 1985), p. 73.
129. "Quantum Chromodynamics near the Confinement Limit," in *Quarks and Leptons*, edited by C. A. Engelbrecht (Springer-Verlag, Berlin, 1986), *Lecture Notes in Physics*, vol. 248, p. 247.
130. "Elementary Particle Physics and the Superconducting Super Collider" (with R. F. Schwitters), *Science* **231**, 1522 (1986).
131. "Signatures for Technicolor" (with E. Eichten, I. Hinchliffe, and K. Lane), *Physical Review D* **34**, 1547 (1986).
132. "Probing the Structure of the Universe from Quarks to Cosmology" (with E. W. Kolb), *The Physics Teacher* **24**, 528 (December, 1986).
133. "Supersymmetry at Very High Energies," in *Supersymmetry*, Proceedings of the 1985 SLAC Summer Institute, edited by Eileen C. Brennan, SLAC Report No. 296 (1986), p. 331.
134. "SSC Briefing Materials" (with R. Johnson, W. K. H. Panofsky, and R. F. Schwitters), March, 1986.

135. "Interactions of Ultrahigh-Energy Neutrinos" (with M. H. Reno and T. P. Walker), *Physical Review Letters* **57**, 774 (1986).
136. "Errata: Supercollider Physics" (with E. Eichten, I. Hinchliffe, and K. Lane), *Reviews of Modern Physics* **58**, 1065 (1986).
137. "To Explore the 1 TeV Scale," in *Quarks, Strings, Dark Matter, and All the Rest*, Proceedings of the 7th Vanderbilt High-Energy Physics Conference, edited by R. S. Panvini and T. J. Weiler (World Scientific, Singapore, 1987), p. 195.
138. "Supercollider Physics: a Prospectus," in *Strings, Lattice Gauge Theory, High Energy Phenomenology*, Proceedings of the Winter School, Panchgani, India, 25 January – 5 February 1986, edited by V. Singh and S. R. Wadia (World Scientific, Singapore, 1987), p. 361.
139. "Beyond the Standard Model," in *Proceedings of the XVII International Symposium on Multiparticle Dynamics*, Seewinkel, Austria, June 15-20, 1986, edited by M. Markytan, W. Majerotto, and J. MacNaughton (World Scientific, Singapore, 1987), p. 21.
140. "The Superconducting Super Collider: Scientific Motivation and Technical Progress," in *Proceedings of the 6th International Conference on $\bar{p}p$ Physics*, edited by K. Egger, H. Faissner, and E. Rademacher (World Scientific, Singapore, 1987), p. 736.
141. "Elementary Particle Physics: Discoveries, Insights, and Tools," in *Quarks, Quasars, and Quandaries*, edited by G. Aubrecht (American Association of Physics Teachers, College Park, MD, 1987), p. 25.
142. "Postscript to IDEAS," in *Particles and Forces: At the Heart of Matter, a Scientific American Reprint Volume*, edited by Richard A. Carrigan, Jr., and W. Peter Trower (W. H. Freeman and Co., New York, 1990), p. 55.
143. "Elementary Particle," in *1988 McGraw-Hill Yearbook of Science and Technology*, edited by S. P. Parker (McGraw-Hill, New York, 1988), p. 124.
144. "Supercollider," in *Science Reporter (India)*, November, 1986.
145. "Heavy Quark Systems" (with W. Kwong and J. L. Rosner), *Annual Review of Nuclear and Particle Science* **37**, 325 (1987).
146. "A Pinacoteca of Cross Sections for Hadroproduction of Heavy Quarks" (with R. K. Ellis), Fermilab Physics Note FN-445, January 22, 1987.
147. "On the detection of ultrahigh-energy neutrinos" (with M. H. Reno), *Physical Review D* **37**, 657 (1988).
148. Book review: *The Particle Hunters*, by Yuval Ne'eman and Yoram Kirsh, *American Scientist*, May–June 1988, p. 297.
149. "For the SSC: A Scientific Adventure for the Nineties," in *The World & I*, September, 1987, p. 298.

150. “Elementary Particle Physics in the Twenty-First Century,” in *Fermilab Industrial Affiliates Roundtable on Research Technology in the Twenty-First Century*, edited by R. A. Carrigan, Jr. and R. B. Fenner (Fermilab, Batavia, Illinois, 1988), p. 15.
151. “Oral Tradition,” review of *Concepts of Particle Physics*, by K. Gottfried and V. F. Weisskopf, *Nature* **330**, 31 (1987).
152. “Física de las partículas elementales: Descubrimientos, Ideas, y Herramientas,” Spanish translation of “Elementary Particle Physics: Discoveries, Insights, and Tools,” translated by Saúl Téllez-Minor and Jaime Stein-Schabes, 1987.
153. “An Introduction to Radiation Protection for the Superconducting Super Collider,” Task Force Report (with K. Metropolis (editor), L. Coulson, W. Freeman, J. D. Jackson, and T. E. Toohig), SSC-SR-1027.
154. “Hadron Colliders Beyond the Z^0 ,” SSC-154, in *Looking beyond the Z*, Proceedings of the Fifteenth SLAC Summer Institute on Particle Physics, SLAC Report No. 328, edited by Eileen C. Brennan (SLAC, Stanford, California, 1988), p. 179.
155. “The Significance of the 1-TeV Scale,” SSC-158, Bernard Gregory Lecture given at CERN, November 19, 1987, included in *The Third Bernard Gregory Lectures*, CERN Yellow Report 89–11.
156. “Principle approach,” review of *Longing for the Harmonies*, by Frank Wilczek and Betsy Devine, *Nature* **333**, 220 (1988).
157. “Supercollider!” Bernard Gregory Lecture given at Ecole Polytechnique de Palaiseau, November 18, 1987 as “La Physique des Particules: découvertes, éclaircissements, outils,” SSC-192, included in *The Third Bernard Gregory Lectures*, CERN Yellow Report 89–11.
158. “Du Supercollisionneur,” Conférence donnée le 18 novembre 1987 à l’Ecole Polytechnique de Palaiseau, sous le titre “La Physique des Particules: découvertes, éclaircissements, outils”, included in *The Third Bernard Gregory Lectures*, CERN Yellow Report 89–11.
159. “Heavy Flavors - ’87: Conference Summary,” in *Proceedings of the International Symposium on the Production and Decay of Heavy Flavors*, edited by E. Bloom and A. Fridman, *Annals of the New York Academy of Sciences* **535**, 617 (1988).
160. “Supercollider Physics,” Bernard Gregory Lecture given at Collège de France, Paris, November 16, 1987 as “La Physique à 40 TeV au Supercollisionneur Proton-Proton,” SSC-191; included in *Physics of Particle Accelerators*, edited by Melvin Month and Margaret Dienes (American Institute of Physics, New York, 1989), AIP Conference Proceedings No. 184, volume 2, p. 2255; and in *The Third Bernard Gregory Lectures*, CERN Yellow Report 89–11.
161. “La Physique des Supercollisionneurs,” Conférence donnée le 16 novembre 1987 au Collège de France, Paris, sous le titre “La Physique à 40 TeV au Supercollisionneur Proton-Proton”, included in *The Third Bernard Gregory Lectures*, CERN Yellow Report 89–11.

162. "Report of the High Energy Physics Advisory Panel Subpanel on Future Modes of Experimental Research in High Energy Physics" (with Sam B. Treiman, et al.), DOE/ER-0380 (July, 1988).
163. *Appraising the Ring*, Statements in Support of the Superconducting Super Collider, compiled and introduced by Leon M. Lederman and Chris Quigg (Universities Research Association, Washington, 1988).
164. "Prospects at High Energies," in *Neutrino '88*, Proceedings of the 13th International Conference on Neutrino Physics and Astrophysics, Tufts University, Medford, Massachusetts, June 7–11, 1988, edited by J. Schneps, *et al.* (World Scientific, Singapore, 1989), p. 792.
165. "Opening the High-Energy Frontier," in *Hadronic Matter in Collision*, Tucson, October 6–12, 1988, edited by P. Carruthers and J. Rafelski (World Scientific, Singapore, 1989). p. 3.
166. "Quantum Fieldwork" (with Kate Metropolis), review of *Beamtimes and Lifetimes*, by Sharon Traweek, *Nature* **338**, 215 (1989).
167. "The Superconducting Super Collider: A New Instrument for Particle Physics," in *International Research Facilities*, Proceedings of the IV European Physical Society Seminar, Zagreb, Yugoslavia, March 17-19, 1989, edited by Ivo Slaus (European Physical Society, Ruder Boskovic Institute, Zagreb, 1989), p. 69.
168. "Uses of Particle Identification for Supercollider Physics," in *Proceedings of the Symposium on Particle Identification at High-Luminosity Hadron Colliders*, Fermilab, April 5-7, 1989, edited by Treva J. Gourlay and Jorge G. Morfin (Fermilab, Batavia, Illinois, 1989), p. 3.
169. "SSC Status Report," in *New Results in Hadronic Interactions*, proceedings of the XXIV Rencontres de Moriond, Les Arcs, France, March 12-18, 1989, edited by J. Tran Thanh Van (Editions Frontières, Gif-sur-Yvette, France, 1990), p. 145.
170. "The Physics Program of the SSC," in *Proceedings of the Workshop on Tracking Systems for the Superconducting Super Collider*, Vancouver, July 24-28, 1989, p. A23.
171. "Report of the 1990 High Energy Physics Advisory Panel Subpanel on SSC Physics" (with Sidney D. Drell, et al.), DOE/ER-0434 (January, 1990).
172. "Hadron Supercolliders: The 1-TeV Scale and Beyond," in *TeV Physics*, CCAST (World Laboratory) Symposium/Workshop Proceedings Volume 8, edited by Tao Huang, et al. (Gordon and Breach, London, 1991), p. 371.
173. "Gauge Boson Dynamics," in *Beyond the Standard Model II*, edited by Kimball A. Milton, Ronald Kantowski, and Mark A. Samuel (World Scientific, Singapore, 1991), p. 186.
174. "Conference Summary," in *'91 High Energy Hadronic Interactions*, Proceedings of the XXVI Rencontres de Moriond, Les Arcs (Savoie) France, March 17 – 22, 1991,

- edited by J. Tran Thanh Van (Editions Frontières, Gif-sur-Yvette, France, 1991), p. 503.
175. “Flavor Asymmetry in the Light-Quark Sea of the Nucleon” (with Estia J. Eichten and Ian Hinchliffe), *Physical Review D***45**, 2269 (1992).
 176. “Flavor Asymmetry of the Nucleon Sea: Consequences for Dilepton Production” (with Estia J. Eichten and Ian Hinchliffe), *Physical Review D***47**, R747 (1993).
 177. “Properties of Orbitally Excited Heavy-Light Mesons” (with Estia J. Eichten and Christopher T. Hill), *Physical Review Letters* **71**, 4116 (1993).
 178. “ B^{**} Properties,” in *Proceedings of the Workshop on B Physics at Hadron Accelerators*, Snowmass, Colorado, edited by P. McBride and C. S. Mishra, SSCL-SR-1225 / FERMILAB-CONF-93/267, p. 443.
 179. “ B_c ,” in *Proceedings of the Workshop on B Physics at Hadron Accelerators*, Snowmass, Colorado, edited by P. McBride and C. S. Mishra, SSCL-SR-1225 / FERMILAB-CONF-93/267, p. 439.
 180. “Mesons with Beauty and Charm: Spectroscopy” (with Estia J. Eichten), *Physical Review D***49**, 5845 (1994).
 181. “Truth in Super Collider Criticism” (Letter to the Editor, with Robert N. Cahn and J. David Jackson), *Science* **263**, 902 (1994).
 182. “Supercollider Physics,” in *Les Rencontres de Physique de la Vallée d’Aoste: Results and Perspectives in Particle Physics*, La Thuile, Aosta Valley, March 6–14, 1994, edited by M. Greco (Éditions Frontières, Gif-sur-Yvette, 1994), p. 721.
 183. “Misrepresentation and Fantasy” (Letter to the Editor, with Robert N. Cahn and J. David Jackson), *Science* **264**, 185 (1994).
 184. “A View of the Particle World,” Review of *Conceptual Foundations of Modern Particle Physics*, by Robert E. Marshak, *Science* **264**, 1952 (1994).
 185. “Spectra of Heavy-Light Mesons” (with Estia J. Eichten and Christopher T. Hill), in *The Future of High-Sensitivity Charm Experiments*, Proceedings of the CHARM2000 Workshop, Fermilab, June 1994, edited by D. M. Kaplan and S. Kwan, FERMILAB-Conf-94/190, p. 345.
 186. “Orbitally Excited Heavy-Light Mesons Revisited,” (with Estia J. Eichten and Christopher T. Hill), in *The Future of High-Sensitivity Charm Experiments*, Proceedings of the CHARM2000 Workshop, Fermilab, June 1994, edited by D. M. Kaplan and S. Kwan, FERMILAB-Conf-94/190, p. 355.
 187. “Top Quark Matters,” in *Proceedings of the 1994 International Conference on High Energy Physics*, ed. Peter J. Bussey and Ian G. Knowles (Institute of Physics, London, 1995), p. 1185.

188. “Conclusions and Perspectives,” in *The Heart of the Matter: from nuclear interactions to quark gluon dynamics*, Proceedings of the Sixth *Rencontres de Blois, Au Cœur de la Matière*, June 20–25, 1994, edited by J.-F. Mathiot and J. Trân Than Vân (Éditions Frontières, Gif-sur-Yvette, 1995), p. 361.
189. “A Little Bit of the Gods,” Presented at the International Symposium and Tribute in Honor of Robert R. Wilson on His 80th Birthday *Celebrating an Era of Courage and Creativity*, Fermi National Accelerator Laboratory, March 4, 1994, under the title, “Golden Ages.”
190. “Quark top afeta o mundo à nossa volta,” in *Jornal da Ciência Hoje* (Brasil), 10 February 1995, p. 5.
191. “Quarkonium Wave Functions at the Origin,” (with Estia J. Eichten), *Physical Review D* **52**, 1726 (1995).
192. “Top–ology,” in *Proceedings of the LISHEP95 cbt Workshop*, Rio de Janeiro, February 1995, edited by F. Caruso, *et al.* (Éditions Frontières, Gif-sur-Yvette, France, 1996), p. 409.
193. “Small- x Parton Densities from HERA and the Ultrahigh-Energy Neutrino-Nucleon Cross Sections,” (with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic), University of Arizona preprint AZPH–TH/95–17, contribution to the VII *Rencontres de Blois*, Frontiers in Strong Interactions / Sixth International Conference on Elastic and Diffractive Scattering, June 1995 (electronic archive: hep-ph/9510295).
194. “Discovery of the Top Quark,” in *Physics News in 1995*, edited by P. F. Schewe and B. P. Stein (American Institute of Physics, College Park, MD, 1996), p. 56.
195. “Particle Physics: Themes and Challenges,” FERMILAB–CONF–95/353–T, to appear in the Proceedings of the Second *Rencontres du Vietnam*, Physics at the Frontiers of the Standard Model, October 1995 (electronic archive: hep-ph/9511438).
196. “Ultrahigh-Energy Neutrino Interactions,” (with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic), *Astroparticle Physics* **5**, 81 (1996).
197. “New Predictions for Neutrino Telescope Event Rates,” (with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic), in *Proceedings of the Fourth International Workshop on Theoretical and Phenomenological Aspects of Underground Physics*, edited by A. Morales, J. Morales, and J. A. Villar, *Nucl. Phys. B (Proc. Supp.)* **48** (1996) 475.
198. “Ultrahigh-Energy Neutrino Interactions and Neutrino Telescope Event Rates,” (with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic), (electronic archive: hep-ph/9604276), in *Neutrino mass, dark matter, gravitational waves, monopole condensation, and light cone quantization*, edited by Behram N. Kursunoglu, Stephan L. Mintz, Arno Perlmutter. (Plenum Press, New York, 1996), p. 121–130.
199. “Top–ology,” *Phys. Today* **50**, 20 (May, 1997); extended version circulated as FERMILAB–PUB–97/091–T (electronic archive: hep-ph/9704332).

200. “Top Priorities: Questions for Snowmass ’96,” FERMILAB-CONF-96/215-T (electronic archive: hep-ph/9704321), to appear in *Proceedings of the 1996 DPF/DPB Summer Study on New Directions for High-Energy Physics (Snowmass 96)*.
201. “Detecting Neutrinos from AGNs and Topological Defects with Neutrino Telescopes,” (with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic), contribution to DPF’96 (electronic archive: hep-ph/9609516), in *DPF ’96: Proceedings*, edited by K. Heller, J. K. Nelson, D. Reeder (World Scientific, Singapore, 1998), p. ???.
202. “Elementary Particles: Yesterday, Today, and Tomorrow,” Stanford Linear Accelerator Center *Beam Line* **27**, (1) 22 (Spring 1997).
203. “The Feel of the Atelier,” Review of *The Quantum Theory of Fields: Volume 2, Modern Applications*, by Steven Weinberg, *Science* **275**, 938 (1997); title changed in journal to “A Physical Atelier.”
204. “Hadron Colliders, the Top Quark, and the Higgs Sector,” FERMILAB-CONF-97/157-T (electronic archive: hep-ph/9707508), in *Advanced School on Electroweak Theory*, Maó, Menorca, Spain, June 17–21, 1996, edited by D. Espriu and A. Pich (World Scientific, Singapore, 1998), p. 115.
205. “Neutrino Interaction Cross Sections,” FERMILAB-CONF-97/158-T, in *Proceedings of the Workshop on Cosmic Neutrinos: Origin, Production, and Detection*, Marseille, France, June 2–3, 1997 (CPPM, Marseille, 1997).
206. “Realizing the Potential of Quarkonium,” FERMILAB-CONF-97/266-T (electronic archive: hep-ph/9707493), in *Twenty Beautiful Years of Bottom Physics*, Illinois Institute of Technology, June 29–July 2, 1997, edited by R. A. Burnstein, D. M. Kaplan, and H. A. Rubin, AIP Conference Proceedings 424 (American Institute of Physics, Woodbury, NY, 1998), p. 173.
207. “Hadron Colliders: the Top Quark and Higgs Boson,” FERMILAB-CONF-98/059-T (electronic archive: hep-ph/9802320), in *Physics Potential and Development of $\mu\mu$ Colliders*, 4th International Conference, San Francisco, December 1997, edited by David B. Cline, AIP Conference Proceedings 441 (American Institute of Physics, Woodbury, NY, 1998), pp. 57–71.
208. “Physics with a Millimole of Muons,” FERMILAB-CONF-98/073-T (electronic archive: hep-ph/9803326), in *Workshop on Physics at the First Muon Collider and at the Front End of a Muon Collider*, Fermilab, November 1997, edited by S. Geer and R. Raja, AIP Conference Proceedings 435 (American Institute of Physics, Woodbury, NY, 1998), p. 242.
209. “Manifestations of R -Parity Violation in Ultrahigh-Energy Neutrino Interactions,” with M. Carena, D. Choudhury, and S. Lola, *Physical Review D* **58**, 095003 (1998) [FERMILAB-PUB-98/088-T (electronic archive: hep-ph/9804380)].
210. “Neutrino Interactions at Ultrahigh Energies,” with Raj Gandhi, Mary Hall Reno, and Ina Sarcevic, *Physical Review D* **58**, 093009 (1998) [FERMILAB-PUB-98/087-T (electronic archive: hep-ph/9807264)].

211. “The Man Who Loved Ideas,” review of *The Meaning of It All: Thoughts of a Citizen Scientist*, by Richard P. Feynman, *FermiNews*, July 17, 1998, p. 6.
212. “Study of R -parity Violation at a μp Collider,” with M. Carena and S. Raychaudhuri FERMILAB-PUB-98/288-T (in preparation).
213. “Perspectives on Heavy Quark 98,” in *Workshop on Heavy Quarks*, edited by Harry W. K. Cheung and Joel N. Butler, (American Institute of Physics, Woodbury, NY, 1999), p. 485 [FERMILAB-PUB-98/390-T (electronic archive: hep-ph/9812299)].
214. “Aesthetic Science,” review of *The Elegant Universe: Superstrings, Hidden Dimensions, and the Quest for the Ultimate Theory*, by Brian Greene, *Scientific American* **280** (4) 101 (April, 1999).
215. “Physics Opportunities in Fermilab’s Futures,” FERMILAB-FN-676.
216. “Electroweak Symmetry Breaking and the Higgs Sector,” presented at the XXVII International Meeting on Fundamental Physics, Sierra Nevada (Granada), Spain, 1 – 5 February 1999, *Acta Physica Polonica B* **30**, 2145 (1999) [FERMILAB-CONF-99/033-T (electronic archive: hep-ph/9905369)].
217. “Questions of Identity,” presented at ν Fact ’99, the ICFA/ECFA Workshop on Neutrino Factories Based on Muon Storage Rings, Lyon, July 5 – 9, 1999, FERMILAB-CONF-99/233-T (electronic archive: hep-ph/9908387), to appear in *Nuclear Instruments and Methods A*.
218. “CP Violation and Rare Decays,” Summary talk at DAΦNE 99, Workshop on Physics and Experiments for DAΦNE, Frascati, November 14 – 17, 1999, FERMILAB-CONF-00/002-T (electronic archive: hep-ph/0001029), to appear in the Proceedings.
219. “The State of the Standard Model,” Opening talk at $\mu\mu$ ’99, December 15 – 17, 1999, FERMILAB-CONF-00/021-T (electronic archive: hep-ph/0001145), to appear in the Proceedings.
220. “Mesons with Beauty and Charm: Weak Decays,” with Estia Eichten (in preparation).